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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/655,403 | 09/05/2000 | Seong Whan Kim | K-213 | 8206 |

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EXAMINER

D AGOSTA, STEPHEN M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2683

DATE MAILED: 06/12/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/655,403

Applicant(s)

KIM ET AL.

Examiner

Stephen M. D'Agosta

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,9,13-15,20,21,26,27,31,35 and 36 is/are rejected.
- 7) ☒ Claim(s) 4-8,10-12,16-19, 22-25,28-30 and 32-34 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Korea on 9-3-1999 (Sunday). A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said application, since the United States application was filed more than twelve months thereafter (9-05-2000, Tuesday).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 9, 13-15, 20, 26, 31 and 35-36 rejected under 35 U.S.C. 103(a) as being unpatentable over Chander et al. US Patent 5,909,651 and further in view of Khalil US Patent 6,091,961 Rydbeck et al. US Patent 6,332,006 and Willey US Patent 6,505,058 (hereafter Chander, Khalil, Rydbeck and Willey).

As per **claims 1, 20, 26 and 31**, Chander teaches a method for transmitting/receiving short message broadcast services in a communication system (abstract teaches transmitting/receiving short messages, broadcast message/indicator and common forward channel, figure 5 and C2, L49-51) **but is silent on** a broadcast indicator comprising:

Transmitting a broadcast indicator to notify whether the base station is transmitting a broadcast message to a mobile

Receiving, at the mobile, the broadcast indicator and checking status of the indicator

Receiving, at the mobile, a broadcast message from said base station if the status of the indicator indicates that said base station is transmitting a broadcast message, wherein said message is received through a common control channel during a broadcast cycle.

Khalil teaches broadcast messages for a mobile radio network (C3, L5-11 and figure 2) that uses a broadcast indicator (see claim 1 and claim 7).

With further regard to claim 15, Chander is silent on the use of an added field in the system parameter message. Heo teaches a CDMA communication system for implementing broadcast message transmission with a reserved field that can be used in place of the applicant's "added" field. The format of the conventional broadcast message described in FIG. 4 is used as it is. However, a format for the broadcast address field shown in FIG. 6 is added to the conventional address format. Referring to FIG. 6, the field parameter (SEG-CNT) indicates the segmentation count field and the field parameter (SEG-SEQ) indicates the segmentation sequence field. Furthermore, the field parameter (RESERVED) has a reserve bit length. As shown in FIG. 6, the length of one byte is required for the broadcast address field added according to the present invention. The parameter (SEG-CNT) has a two bit length and the parameter (SEG-SEQ) a two bit length. On the other hand, the reserve parameter (RESERVED) has four bit length (C6, L16-45). One skilled in the art would use the reserved field as the "added field" to notify whether a base station provides a broadcast indicator.

With further regard to claims 20 and 26, Chander is silent on the use of a second common control channel (and monitoring of said second channel). Rydbeck teaches the transmission of a message (eg. SMS) via first and second control channels (abstract and claim 55) which would be monitored in order to determine if data is present on either channel.

With further regard to claim 31, Chander teaches header information (eg. paging indicator) that provides indication to the mobile regarding various operational parameters (C4, L61-67 to C5, L1-20) which reads on "MS being in an idle state and monitoring Page Channel/FCC" **but is silent on** a configuration change indicator.

Willey teaches a method for determining whether to wake up a mobile station. The mobile station includes first configuration parameters relating to a base station. The method includes the steps of receiving a configuration change indicator at the mobile station. The configuration change indicator is indicative that the first configuration parameters relating to the base station are different than second configuration parameters that currently relate to the base station. The method further includes waking up the mobile station to receive the second configuration parameters (Abstract).

It would have been obvious to one skilled in the art at the time of the invention to modify Chander, such that a broadcast indicator is used along with a second control channel and configuration change indicator, to provide means to inform the mobile that a broadcast is to be sent (via several paths/channels) and that configuration changes may be required, to provide information to the mobile that a broadcast message is to be transmitted and that configuration changes may be required (if MS had been in idle state).

As per **claim 2**, Chander teaches claim 1 further comprising transmitting (BTS to MS) an index through a paging channel prior to transmitting the broadcast indicator, wherein the index is used to calculate the broadcast cycle (abstract teaches slot cycle index and Broadcast Paging Cycle).

As per **claim 9**, Chander teaches claim 1 further comprising a header that contains information regarding the message and its contents (figure 5 and C4, L38-48 and C4, L61-67 to C5, L1-30) **which reads on:**

Adding a field to an expanded system parameter message and transmitting said field to the mobile, wherein said field notifies whether said base station provides a broadcast indicator

Checking, at the mobile, the status of the indicator, if said field indicates that said base station provides an indicator

Receiving, at the mobile, a broadcast message from said base station if the status of the indicator indicates that said base station is transmitting a broadcast message.

As per **claim 13**, Chander teaches claim 1 wherein the common control channel is one of either a paging channel or a broadcast channel (Abstract teaches Paging Channel and Broadcast Paging Channel).

As per **claim 14**, Chander teaches claim 1 wherein the mobile enters an idle state if the broadcast indicator indicates the base station is not transmitting a broadcast message (C5, L13-20 reads on the claim).

As per **claim 35**, Chander teaches claim 31 wherein the information slot is sent from the base station to a subscriber unit to indicate whether the base station is transmitting a broadcast message (Abstract teaches a broadcast message being indicated/transmitted via the common forward channel).

As per **claim 36**, Chander teaches claim 35 **but is silent on** wherein the base station is indicated to have sent a broadcast message when the broadcast indicator is set to "1".

The examiner takes Official Notice that the use of the term "indicator" inherently requires the transmission of data that the receiver identifies with the indicator and how it is to interpret it. In digital systems, a one bit indicator would have values of either "0" or "1" while a multi-bit indicator would have combinations of "0's" and "1's". Since the applicant teaches a broadcast or no broadcast, a "1" or a "0" would be used to indicate presence/absence of the broadcast.

It would have been obvious to one skilled in the art at the time of the invention to modify Chander, such that the base station is indicated to have sent a broadcast message when the broadcast indicator is set to "1", to provide information to the mobile that a broadcast is/is not being transmitted.

Claims 3, 21 and 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Chander/Khalil/Rydbeck/Willey further in view of Butler et al. US Patent 6,111,865 (hereafter Butler).

As per **claims 3, 21 and 27**, Chander teaches claim 1 **but is silent on** wherein the broadcast indicator through a quick paging channel before transmitting a broadcast message (eg. channel one is QPCH and channel two is paging channel).

Chander does teach the use of the Paging Channel (C2, L34-40) and the Quick Page/Paging Channel (QPCH) is known in the art.

Butler teaches the use of a quick paging channel (abstract).

It would have been obvious to one skilled in the art at the time of the invention to modify Chander, such that the QPCH is used to send the broadcast indicator, to provide several paths to the mobile should a primary path(s) be congested/blocked.

Allowable Subject Matter

Claims 4-8, 10-12, 16-19, 22-25, 28-30 and 32-34 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4-8, 16-17: Chander does not teach a reserved region of the QPCH, paging/configuration change indicators, broadcast indicator is at least 2 bits and transmitting broadcast indicator 100ms prior to transmitting broadcast message.

Claims 10-12, 18-19: Chander does not teach monitoring first slot of control channel in every broadcast cycle. Claims 11 and 12 depend on claim 10.

Claims 22-25: Chander does not teach that if no broadcast message is transmitted, the second channel is not monitored, extended system parameters message, first slot of paging channel is continuously monitored and broadcast message sent 100ms prior to broadcasting message.

Claims 28-30: Chander does not teach monitoring first common channel determines a value of a plurality of paging indicators and a configuration change indicator carried on the QPCH. Claims 29-30 depend on claim 28.

Claims 32-34: Chander does not teach the BI preceding the CCI in the information slot OR the BI/CCU having length of 2 bits when data rate is 4800bps OR length of 4 bits when data rate is 9600bps.

Conclusion

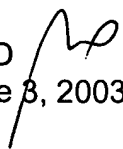
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:


1. Diachina et al. US 6,041,047 teaches digital channels support B'cast SMS
2. Lietsalmi et al. US 6,201,974 teaches index for cell broadcast service.
3. Mouly US 5,878,033 teaches broadcast messages.
4. Yeom US 6,526,027 teaches broadcast SMS messages.
5. Jou US 6,505,052 teaches SMS messages.
6. Li US 6,349,210 teaches broadcasting messages.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter can be reached on 703-308-6732. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

SMD 
June 3, 2003


WILLIAM TROST
SUPERVISORY PATENT EXAMINER
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